

# Patients' and ambulance service clinicians' experiences of prehospital care for acute myocardial infarction and stroke: a qualitative study

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## ABSTRACT

**Background** Patients with suspected acute myocardial infarction (AMI) and stroke commonly present first to the ambulance service. Little is known about experiences of prehospital care which are important for measuring the quality of services for patients with AMI or stroke.

**Aim** We explored experiences of patients, who had accessed the ambulance service for AMI or stroke, and clinicians regularly treating patients for these conditions in the prehospital setting.

**Method** A qualitative research design was employed to obtain rich and detailed data to explore and compare participants' experiences of emergency prehospital care for AMI and stroke.

**Results** We conducted 33 semistructured interviews with service users and clinicians and one focus group with five clinicians. Four main themes emerged: communication, professionalism, treatment of condition and the transition from home to hospital. Patients focused on both personal and technical skills. Technical knowledge and relational skills together contributed to a perception of professionalism in ambulance personnel. Patients' experience was enhanced when physical, emotional and social needs were attended to and they emphasised effective communication within the clinician–patient relationship to be the key. However, we found a discrepancy between paramedics' perceptions of patients' expectations and patients' lack of knowledge of the paramedic role.

**Conclusions** Factors that contribute to better patient experience are not necessarily understood in the same way by patients and clinicians. Our findings can contribute to the development of patient experience measures for prehospital care.

## INTRODUCTION

Cardiovascular disease is the most common cause of death in the UK accounting for almost two-thirds of premature deaths. The annual incidence of acute myocardial infarction (AMI) is estimated to be 268 000 cases<sup>1</sup> and stroke 150 000 cases.<sup>2</sup> People suffering from cardiovascular disease often present acutely to ambulance services with symptoms of AMI or stroke and therefore patients' experiences and outcomes of prehospital care are important for measuring the quality of services.

Patient reported experience measures (PREMs) are increasingly being seen as important tools by healthcare providers, commissioners, regulators and service users. These are usually short, self-completion patient questionnaires which measure experience of care at a point in time.<sup>3</sup>

Despite the introduction of PREMs to the NHS,<sup>4 5</sup> there are few validated PREMs for specific conditions, such as stroke and AMI, currently in use or under development for use in prehospital care and, therefore, this is an area for further research and development.

To contribute to this process, we aimed to gather data on the views of patients accessing the ambulance service and clinicians treating patients to compare concordance and dissonance in the views of both groups.

## METHOD

We used a qualitative design, interviewing participants who had received or provided prehospital clinical care in the East Midlands, UK. We decided to interview clinicians because we also wanted to understand what aspects of care they considered important for patients' well-being. Any key differences highlighted between patient and clinician perspectives would provide the rationale for important additions to paramedic education and training. We wished to obtain rich and detailed data in order to explore and compare the participants' experiences of prehospital care for suspected stroke or suspected AMI.

We used purposive sampling for patients and clinicians. Patients were recruited using postal invitations from general practices, waiting room posters and leaflets. To be eligible for inclusion, patients were required to have experienced prehospital emergency care for suspected AMI or stroke within the previous 12 months. Patients completed a demographic questionnaire before the interview asking about their age, sex, ethnicity and medical condition.

Clinicians were purposively recruited following the distribution of participant information packs across a number of ambulance stations in the East Midlands. We collected demographic data from clinicians about their job role, length of time in their current role and length of service as a clinician.

Patients and clinicians were given the option to be interviewed individually or in a focus group. Contributions made by the participant's partner (or carer) provided a valuable additional dimension to the data collection. Data collection took place between February and December 2011.

Data were analysed using a thematic network approach<sup>6</sup> supported by NVivo 8. A coding frame was developed based on questions included within the interview schedules. This was modified following thorough immersion in the text to produce themes and subthemes. The thematic networks

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were discussed and refined by all three authors. The analyses of clinician and patient data were undertaken together as one dataset. We then examined the similarities and differences between data from patients' and clinicians' views to understand how these converged and diverged.

## RESULTS

We interviewed 22 patient participants, aged between 35 and >65 years, with suspected AMI, or heart-related conditions, or stroke. In all, 17 ambulance service staff were recruited with clinical experience ranging from <1 year to more than 21 years.

The results are presented for each theme below first in relation to the experiences shared by patients and then in terms of the clinicians' experiences of providing care to this specific group of patients. Any differences in opinion that emerged between the patients and clinicians are then discussed.

Clinicians' responses generally supported what patients were telling us in terms of understanding the most important components of the patient experience for AMI and stroke. There were key differences in terms of expectations of treatment and the physical interior of ambulances that will be discussed later. In some instances, clinicians reported an awareness of not providing optimal care in relation to the patient experience of the situation.

The key themes that emerged from the interviews were: communication; professionalism; treatment; and the transition from home to hospital (table 1).

## COMMUNICATION

Patients, regardless of whether they were presenting with stroke or AMI, often considered the same factors as essential to a good prehospital experience. They focused on both the personal and technical skills of the clinician emphasising effective communication within the clinician–patient relationship. A patient said:

They also treat you as a person, not as a condition and the way they speak to you; it's their bed side manner... they're spot on...they know how to put your mind at rest even if you're panicking, they know how to talk to you, they know how to treat you they're brilliant. (P14)

Conversely:

There was not one kind word of concern, not one and that I can swear it with my life...I didn't hear any kind word or see any smile anything like that in the situation where I would expect that most. (P15)

Patients expressed that the quality of clinicians' explanations increased their confidence in the clinicians' abilities to treat them. Clinicians also acknowledged that explanations are

important and, additionally, establish rapport with patients on their level and in their terms:

It's about...building up that relationship between the patient and professional, so that they feel comfortable. (C3)

If they want to be called Fred when their name is Paul then they'll get called Fred. (C8)

Frequent communication and contact between clinician and patient were imperative to patients' experience of being involved in their own care; as one patient commented: 'I was impressed with the fact that there was contact all the time' (P10). Often, infrequent communication led to a sense of detachment:

I was swallowing these tears and she was there, she wasn't even looking at me. She was just there, she wasn't checking, she wasn't asking, she wasn't er, you know, nothing. (PtM15)

The importance of frequent communication was further highlighted by a clinician describing the necessity to maintain communication during the journey to hospital:

So I think it's actually about continuing that rapport and communication with the patient making sure that they know what's going on and answering any questions that they've got at that point. (C3)

## Explanation of clinical assessments and treatment

The manner in which patients were spoken to by clinicians was as important as what was being said. This helped patients to feel at ease, and understand what was happening to them. As P1 stated, a thorough explanation of what had happened made them feel 'quite confident and quite comfortable' with the clinicians.

I didn't feel anxious...from the moment they picked me up from the house until I was handed over, they explained it all. (P16)

It was quite nice that you didn't feel like a third person... they kept you informed on what they were doing... explaining what was happening...sometimes that can stress you out when you don't know what's going on'. (P9)

Additionally, clinicians felt that explanations were a fundamental part of their practice.

GTN [glyceryl trinitrate: a drug that widens the blood vessels allowing more oxygenated blood to flow through them] as well, why we're giving that, well we're giving that really because if it is again a AMI we just want to make sure that the heart isn't working too hard...its just explaining what that's all about. (C5)

Clinicians also recognised when treatment processes were not explained to patients, this may have negatively affected patients' experiences.

If you get somebody who's had like, like a massive stroke I think the care, obviously you're giving them the oxygen and things like that and sometimes I think my lack of care would have been, really you're rushing so much, you don't have the time, you're under pressure to deliver so to speak so you do sometimes forget about the other person or forget about the patient who can still hear you and understand even though they might not be able to communicate and sometimes you don't really talk enough to the patient you don't tell them what you're going to do. You just literally pick them up, grab them, put them in the chair, oxygen, done, gone. (C1)

**Table 1** Themes and subthemes that emerged from the interviews

| Theme                  | Subtheme  |
|------------------------|---|
| Communication          | <ul style="list-style-type: none"> <li>► Explanation of clinical assessments and treatment</li> <li>► Explanation of condition</li> <li>► Reassurance</li> <li>► Holistic care</li> </ul> |
| Treatment of condition | <ul style="list-style-type: none"> <li>► Expectations of treatment</li> <li>► Pain management</li> </ul>  |
| Professionalism        |   |
| Transitions            | <ul style="list-style-type: none"> <li>► Timeliness of care</li> <li>► Journey to hospital</li> <li>► Hand-over to the acute unit</li> </ul>  |

## Explanation of condition

Patients had differing views on the importance of a diagnosis being given.

One patient said that when the clinicians diagnosed them with a suspected stroke this put 'their mind at rest.' The diagnosis indicated to them that the paramedics were 'in control of the situation' (P20). Interestingly, another patient who was suspected as having a heart attack said 'I wouldn't have wanted to hear that [diagnosis] unless I was in hospital' (P12).

Nonetheless, many clinicians assumed that patients expected them to offer a diagnosis and felt that that they had a duty to be honest to patients.

When you turn up as a paramedic no matter what you're going to them people always expect an answer, we can't always give it but they've got the mechanic there that's got the knowledge and they want them to diagnose them and tell them what's wrong with their engine it's as simple as that. (C7)

I think it's important that you talk to the patients, you're honest with the patient and you don't try and hide the fact that they are having a stroke or they are having an AMI; you've got to be honest with them. (C2)

However, a few clinicians argued that it was not their role to give a diagnosis and that this was the responsibility of the attending hospital doctor.

I believe I'm a paramedic and it's up to doctors to make the ultimate diagnosis; I just treat symptoms. (C8)

## Reassurance

Reassurance from clinicians was often highly valued by patients. Patients were often unsure about the cause of their symptoms, did not want to call the ambulance service out unnecessarily and did not want to be a burden on health services despite their obvious ill-health. Emotional responses to the clinicians' arrival were common and included 'great relief' (P7) and tears from some patients.

Confirmation that they were right to call the emergency services by the attending clinician legitimised their need for care and subsequently enabled patients to 'hand over' responsibility for their health to the clinician.

Well I started to feel relieved that the worry of 'am I having a heart attack' was in a way passed over to them because they were now dealing with it so I did feel very relieved yes as one does when you know that you're sort of, you're being cared for by somebody else you haven't got the same level of anxiety. (P10)

Patients expected clinicians to make them feel better upon their arrival; however, one patient said:

You know you wait for the ambulance, they're going to save you, they're going to help you, but I was in much better hands with [friend] than with them, I just felt like I was just a menace. (P15)

Correspondingly, clinicians understood that patients needed this type of reassurance.

It's reassuring the patient... 'everything will be fine, everything will be fine lets get you sorted' 'you're our priority' and things like that really. (C1)

However, some clinicians were cautious of using such bold statements.

I never tell them they are gonna be alright, because I don't know, yeah, 'everything will be fine' I don't know everything

will be fine, I don't know that so I can't you know, I always try to be honest with them. (C16)

Nevertheless, clinicians recognised that if patients were put at ease both physical and psychological benefits may be engendered. A clinician suggested that:

Keeping somebody calm who is having say a AMI, does put less stress on the heart and there is evidence to suggest that that could lead to better outcomes, so things like reassurance [help]. (C3)

## Feeling cared for

From the patients' perspective it was essential that the clinicians made them feel cared for. Clinicians with a caring manner were able to reduce the apprehension felt by patients. Patients recognised that their life was in the hands of somebody else emphasising their vulnerability and the necessity of clinicians to demonstrate caring qualities.

It's awful to think but I do think that they stopped me from dying, I do really. I think if I'd have had less caring people there I don't think I would have been here today. (P19)

You need someone that's going to reassure you and you know and be caring and help you get through until you can get the right treatment from a doctor. (P10)

One patient reported telling the clinicians that they knew that they were having a heart attack, but felt that their concerns were not taken seriously. This caused the patient further distress, because they were made to feel as though they were exaggerating their symptoms.

I was sure, I told them, I'm having a heart attack...[they] dismissed it dismissed it completely and when she took another ECG she said 'you see there is nothing wrong with you'. (P15)

I was forced by the situation to be at the, you know, in her hands my life was in the hands of this rude person who was completely un-caring. (P15)

Clinicians also suggested that caring was a central component of their role. As one clinician said, 'I only treat as I would treat my own mother' (C8). There was a reference to treating patients in the same way as family members; for instance, one clinician acknowledged 'if you can't put the relative and patient at ease then their experience is going to be horrendous' (C6). This suggests a commitment is required by clinicians to meet the patient's emotional, as well as physical needs, and consequently strive to deliver high quality patient care, beyond a mechanistic biomedical model of care.

## Holistic care

Holistic care is defined, for the context of this study, as the treatment of the patients' physical and emotional needs through assessment, clinical treatment and reassurance. This included attending to the needs of relatives (and sometimes pets) and dealing with the practicalities involved in securing patients' property before leaving for the hospital. If patients felt that they had received holistic care then this enhanced their prehospital experience.

It wasn't just me; they treated the whole event, not just the bloke on the floor. (P20)

I was worried about my cat so they fed my cat before they took me in the ambulance which was the kindest thing to do...quite practical too because that would have just made me more anxious. (P10)

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Equally the relational aspects of care were also identified, highlighting the poor service that a patient had received.

I didn't hear any kind word or see any smile anything like that in the situation where I would expect that most. (P15)

Some clinicians demonstrated an understanding for the patient's personal concerns that went beyond simply providing clinical care. This showed foresight in terms of realising that aspects other than the medical condition the patient was suffering from would be a worry to them. A clinician remarked that 'it was important to look at the patient as a whole, the social aspects of the patient' (C5).

In summary, communication throughout the journey to the hospital that aims to improve the patients' physical and psychological well-being is what patients and clinicians assume to be quality care and will, it seems, provide the best prehospital care experiences. This was recognised by both patients and clinicians and supports the notion that holistic care can be beneficial to positive clinical outcomes.

## TREATMENT OF CONDITION

### Expectations of treatment

There was sometimes a mismatch between clinicians' perceptions of what patients expected and what patients actually reported that they expected. Patients expected high standards of care but were often ignorant about the detail of prehospital assessments or treatments.

So you know the guys turn up and do what they need to do so...but as regards to what they're supposed to do I have no idea. (P13)

In contrast, clinicians believed that patients had very high expectations and that they were fully informed about the care that they should receive.

They expect an ambulance before they've put the phone down, they expect you to take away all of their pain completely. They would like you to make them better completely and they expect a smooth and comfortable ride to hospital but they also expect to get to hospital within two seconds. (C4)

### Pain management

Pain was a significant factor for many patients whose condition was cardiac-related. Patients described their pain as 'excruciating' (P9) and wanted to receive pain relief as soon as possible: 'I just wanted someone to give me something to take the pain away' (P6). Patients were generally satisfied with how their pain was assessed and managed and accepted that the resources available to ambulance clinicians were limited. This limitation gave way to the understanding that a complete eradication of pain was unlikely. Only one patient reported dissatisfaction with the way that their pain was managed. Despite this patient repeatedly stating that they were in a lot of pain, they recollected: 'I was just telling her that I can't swallow, that it's choking me that it's unbearable' (P15). In sum, they were not listened to, which may have been a factor in this patient's description of the prehospital experience as 'the worst thing that ever happened to me, to be in that ambulance' (P15).

The *subjectivity* of pain was repeatedly framed as an issue in the interviews with clinicians. Clinicians admitted that they usually based their pain management decisions on how much pain they considered the patient to be in rather than the patients' self-reporting of pain levels. A number of clinicians also acknowledged that although pain should be assessed and

managed quickly, it was not always dealt with efficiently, because in the prehospital setting it can be 'one of those areas that's forgotten about' (C3). This has implications for the competence that prehospital clinicians have to demonstrate to be understood by patients as professionals in their field.

## PROFESSIONALISM OF CLINICIANS

Patients' views of professionalism were closely linked to the idea of the clinicians' competence.

I think the training that they have must be excellent because their bed side manner so to speak as well as their medical knowledge is really good. (P14).

If patients were dissatisfied with their care then this led them conclude that the clinicians were inadequately trained for their role.

But they train them [clinicians] for how many weeks [?], how many months [?] and they send them to all sort of situations to save the lives so I don't know...they're not even nurses, they're not even nurses. (P15)

Patients' notions of professionalism were also associated with how the clinician 'connected' with the patient at a personal level. A combination of good clinical and relational care achieved the highest reported levels of patient satisfaction.

I mean professional in the manner that they do know their job but they also treat you as a person, not as a condition and the way they speak to you; it's their bed side manner that they've got. (P14)

The degree of control that the patient perceived the clinician to have influenced the positivity of their experience.

It's not necessarily by saying anything verbal like 'I'm reassuring you' but it's a sense, a real sense of being calm, being in control, knowing what they are doing. (P8)

I would say he panicked a bit...I just got the impression that he had never been in the presence of someone having a AMI...well I don't know what's what here but I think' and you think well are you basing this on judgement or what?...you begin to lose faith in them a bit. (P6)

The clinicians' interpretation of what it meant to be professional was more narrowly concerned with clinical and technical competence. They focused on keeping themselves updated with training and evidence-based practice.

Professionalism means to me...following erm job mastery so if you have a patient condition it's researching the books, what is job mastery for that, what should be the highest standard and then really adopting that standard. (C4)

Clinicians were acutely aware of their professional image and that the ability to *appear* calm regardless of the circumstances was important to their presentation as a healthcare professional.

I always describe it as a duck approach...if you think of a duck or a swan on top of the water they always look so serene and calm no matter how much they're paddling underneath the water. (C6)

Patient experiences of prehospital care for AMI and stroke were enhanced when clinicians presented themselves professionally and communicated effectively about the different interventions, stages of treatment and transitions that they would perform during the journey to hospital.



## TRANSITIONS

Key transitions along the prehospital care pathway also affected patients' prehospital experiences.

What happened to me would be a model scenario if you like, in terms of how efficient they were, how they got there, how they dealt with me when I was ill, and right to taking me into the hospital and y'know giving the other people information. (P5)

## Timeliness

Both patients' and clinicians' experience was improved when the ambulance arrived quickly.

The speed with which they got here, I was so impressed I'm always telling everybody, under four minutes...in my case they were here in under four minutes and that was impressive yeah. (P12)

It may be that we don't send an ambulance straight away and therefore; there is a delay in the ambulance arriving there in the first place, which means that you are already on the back foot, because they think that it has taken the ambulance too long to get there. (C3)

Several patients did, however, raise concerns over the time taken for a crew to arrive and attributed these limitations to a lack of vehicles and understanding that living in rural areas will inevitably take longer to get to.

They were quick getting here, or fairly quickly erm considering its 12 miles from [town]. I think they were here in well about 15 minutes, my husband said it was definitely no more than 20 minutes which we thought was really good. (P22)

It was not just the time to arrive; patients also expected clinicians to undertake clinical assessment and initiate treatment quickly.

Those that... come in, assess you, don't stand around you know chewing the facts...that sort of really get to grips with the job and get on with it. (P6)

Sometimes I've had paramedics that seem to be very very long winded and you know it's almost like it's too much trouble. (P6)

## Journey to hospital

Patients, when describing their journey to hospital, often expressed dissatisfaction with the vehicle; one described it as 'the most uncomfortable thing I've ever been in' (P5). Another, that 'it was old, it rattled, (and) looked a bit like it was past its best' (P10). This dissatisfaction contrasted with clinicians' beliefs that the condition of the ambulance would not be important to patients, 'Patients don't notice, relatives don't notice, they're not bothered' (C6).

## Hand-over to hospital

A smooth and competent hand-over from prehospital to acute care was important, for example, using a prealert procedure to alert the acute team of the patient's imminent arrival.

They phoned the hospital and told him their ETA and what the problem was and when we got into the hospital we was taken straight in. (P20)

It was important to patients that they felt that a formal transfer of care had taken place between prehospital and acute care staff. Patients were pleased when the hand-over was explained to them, for instance, one patient was told that 'we're going to leave you with the people that know what they're doing' (P19). Patients were less satisfied when they had

to wait to be admitted because of queues at the hospital. This was important because as one clinician observed:

Management of the patient involves everybody and we're only one link in that chain we're only as good as the link is before us and the one that's after us. (C5)

The experience of the whole care pathway for patients requiring emergency care, from community to prehospital to acute and back to home and the interface between these, was paramount.

## DISCUSSION

### Summary of main findings

Patients' experiences of prehospital care for stroke and AMI were improved by good communication, professionalism, attention to treatment and a high quality transition between the prehospital and secondary care interface. Patient experiences were also enhanced when physical, emotional and social needs were attended to. This included addressing the needs of relatives and other practical issues, such as attending to pets or securing patients' property before leaving for hospital. In this study, patients acknowledged that paramedics' combined technical knowledge and relational skills, when present, contributed to a sense of professionalism in the ambulance service. We found a divergence in both patients' and clinicians' opinions of the relevance of receiving/giving a diagnosis, which raises a debate around professional roles and how diagnostic information should be conveyed in an urgent setting by paramedic staff. Although patients welcomed a speedy response, this was not always necessary for them to report a high quality experience. In contrast, clinicians were concerned about the priority placed on response times as opposed to effective treatment and efficient transportation.<sup>7</sup>

### Strengths and limitations of the study

Patients and clinicians who received information about this study but chose not to take part may have had different views from those we interviewed. Patients and clinicians were mainly white British and only one patient reported being in a minority ethnic group. Furthermore, there were fewer women than men in the clinician and patient groups. The strengths of the study included the triangulation of a diverse range of clinician and patient perspectives and the application of rigorous analysis and interpretation to the data. The researchers' backgrounds in psychology (FT), sociology (ZD) and clinical practice (ANS) enabled a range of perspectives to be brought to the analysis. Participants volunteered to share their experiences to improve the quality of care provided to future patients and we were able to draw upon their willingness, learning relevant information about what is important to patients about their experience of prehospital care.

### Comparison with existing literature

This is the first study investigating prehospital care from the perspective of patients presenting with suspected stroke and AMI and prehospital clinicians involved with treatment. Accessing emergency prehospital care for stroke and AMI is a distressing event<sup>8 9</sup> and the uniqueness of the prehospital care situation should be considered; patients often have little time to prepare for this experience compared with non-acute or ambulatory care situations.

Effective communication also provided reassurance to patients in our study. We found that effective communication of information, as in other acute setting studies,<sup>10</sup> reduces fear

and enhances psychological well-being. The intonation that clinicians use is also important. For instance, if patients feel that they are spoken to unkindly this can cause them further distress.<sup>10</sup> The importance of communication is sometimes overlooked by prehospital clinicians in their focus on technical aspects of care.<sup>11</sup> This illustrates a tension that prehospital clinicians are caught in. That is, between performing within a bio-medical model of healthcare, which tries to find causation, prognosis and treatment of the body but which overlooks the psycho-social and emotional components of illness we found to be essential for a good patient experience.

The notion of holism suggests that health professionals should seek to extend their role beyond meeting patients' immediate physical needs by understanding their wider lives and needs.<sup>12</sup> Our understanding of holistic care complements work that illustrates the importance of thoughtfulness, consideration and respect towards the patient and next of kin.<sup>11</sup> Managing family members' concerns is an important aspect of care because relatives may be just as fearful as the patient.<sup>13</sup> Prehospital clinicians in this study, despite having little or no formal training in these areas of care, more often than not met these aims.<sup>14</sup>

The notion of reassurance has been widely explored in healthcare settings.<sup>10 15–17</sup> The description of the 'reassuring doctor' as 'absolutely dependable', 'unflustered', 'free from weakness' and 'confident',<sup>18</sup> complements those vital characteristics of prehospital clinicians understood as important by patients in this study. These characteristics demonstrated clinical professionalism to patients. However, the value of prehospital clinicians simply reassuring patients that they will recover is unclear according to the literature.<sup>19 20</sup> We found that some patients wanted this type of reassurance and found it to be an acceptable and effective method of reducing worry;<sup>19</sup> however, a number of clinicians reported feeling uncomfortable telling patients they would recover when, due to the seriousness of AMI and stroke, this could not be guaranteed.

Professionalism, which has been characterised as the glue which holds together 'commitment to (and respect for) best practice' incorporating 'respect: to others (relationship) (and) to due process in gathering and analysing information (diagnostics)',<sup>21</sup> was considered important by patients and clinicians in our study. Other components of professionalism include: perceived level of training of staff, professional look of staff, level of trust in staff and level of competency of staff.<sup>22</sup> Prehospital clinicians have previously reported a lack of recognition of their professional status by the public and other healthcare professionals.<sup>23</sup> This perception was not generally supported by our findings unless the patients reported a negative experience in which case this impacted on their perception of the professionalism of the ambulance service.

The relationship between expectations and satisfaction with healthcare is not clearly understood despite the assumption that patient expectations are a causal factor in satisfaction.<sup>24</sup> Patients who had not previously used the ambulance service for their condition did not know what constituted effective care; therefore, an expectation, beyond one of a requirement to help, was often not apparent. It has been suggested that to understand how patients evaluate their healthcare consideration of key elements such as the level of experience within health services and use of healthcare systems, the images of health held by patients and the goals of seeking healthcare in each specific instance need first to be understood.<sup>25</sup> Thus, improving patients' understanding of the role of the ambulance service is important for improving patient experience.<sup>26</sup>

Nevertheless, despite this uncertainty in the specific function of prehospital services, patient satisfaction was generally high, which echoes findings from some previous studies.<sup>27–29</sup>

### Implications for practice and future research

The findings of this study demonstrated the importance patients placed on receiving appropriate information. Clinicians should ensure that they provide patients with information about what is happening to them, how they will be treated and what will happen to them throughout the prehospital care pathway. Patients should be given the choice by ambulance clinicians of whether or not they want to receive a provisional diagnosis from them. This could be incorporated as a central question routinely asked as part of standard clinical practice. Clinicians should also, wherever possible, consider a patient's wider emotional and social needs. We will use these findings to inform the development of instruments to measure patient experiences of stroke and AMI.

### Conclusions

Patients identified effective communication and professionalism as being most important to them. Satisfaction with the ambulance service was high but poor communication did have a detrimental effect on patient experience and satisfaction in some instances. Areas of dissatisfaction included response times and comfort during transport. There is a need for greater public education about the changing paramedic role so that patients are better informed about what to expect from the service. We will now use this dataset to generate the preliminary questions for inclusion in the PREM questionnaires before undertaking further research involving focus groups and cognitive interviews<sup>30</sup> to assess their reliability and validity.

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**Competing interests** None.

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## Patients' and ambulance service clinicians' experiences of prehospital care for acute myocardial infarction and stroke: a qualitative study

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